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MAPCO ALASKA PETROLEUM INC.
1100 H&H LANE
NORTH POLE, ALASKA 99705
(907) 488-2741

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AIR & RADIATION BRANCH

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RCRA Compliance Section

August 11, 1995

Betty Wiese
US Environmental Protection Agency
HW-112
1200 Sixth Avenue, AT-082
Seattle, WA 98101

ENFORCEMENT SENSITIVE

FILE COPY

RE: High Benzene Levels in Wastewater Lagoon

Dear Ms. Wiese,

On July 15, 1995 MAPCO ALASKA PETROLEUM Inc.'s (MAPI's) North Pole Refinery experienced a large rainstorm and power outage which led to an emergency dumping of wastewater containing benzene above the regulatory limit of 0.5 mg/L to one of our wastewater lagoons. The purpose of this letter is to notify you of this problem and detail the steps taken to mitigate it.

From July 14 to 15 the North Pole area received an unusually large rainstorm, approximately 2 inches. The water in our oil/water separator tank (tank 192) rose to high levels as rain water collected in the sumps and drains. Near the end of this 2-inch rainfall, the power went out for about 45 minutes. When the power was restored, the large volume of water that had collected on the refinery skids was pumped to tank 192. Air stripping units downstream of tank 192 normally reduce benzene levels in the wastewater to low parts per billion prior to aggressive biological treatment in our wastewater lagoons. The slug of rainwater caused by the power outage exceeded the capacity of the stripping units to lower the level in tank 192. The level in tank 192 increased to the point at which slop oil began to overflow the tank. The only way to lower the level in tank 192 at this point was to bypass the air strippers. Wastewater was drained from tank 192 to lagoon B without air stripping. This was accomplished by gravity draining tank 192 through two 1½-inch hoses for three hours. The approximate volume is not known. The flow was not metered and lagoon B already contained an unknown volume of water prior to draining tank 192.

A wastewater sample taken on July 15 showed the benzene level in lagoon B to be 680 µg/L, which slightly exceeded the regulatory limit of 500 µg/L. After one week we began transferring the water to lagoon A for additional treatment and subsequent discharge to the North Pole wastewater treatment facility. The wastewater being transferred was sampled on July 26 and had a benzene level of only 0.9 µg/L. Lagoon B was completely empty on August 8 well under the 30 day limit for aggressive biological treatment high rate aeration (40 CFR 261.31(b)(2)). This was

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important to avoid having any lagoon B sludge defined as hazardous waste (primary oil/water/solids separation sludge (F037)).

If you have any questions or comments please call Kathleen McCullom at 488-0033.

Sincerely,

David C. Rowse

David C. Rowse
General Manager
MAPCO ALASKA PETROLEUM, Inc.

cc: Lin Patterson/MAPCO
William McGee/ADEC